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In the claims:

Please amend the claims as shown below:

- 5 1. (Currently amended) A method for ~~the~~ an oxygen gas delignification of cellulose pulp in a gas/fluid suspension in which the oxygen gas delignification takes place in a reactor system with ~~one or several~~ oxygen gas reactors, comprising:
10 ~~in which delignification chemicals such as~~ providing delignification chemicals in ~~oxygen gas~~ at such a quantity that oxygen gas remains present during ~~the~~ a complete reaction process in the oxygen gas reactor reactors; together with the oxygen gas, providing alkali at an amount that ensures that a the pH value in the oxygen gas reactor
15 remains over 9;
adding the oxygen gas and alkali upstream of ~~are added at least before a first~~ the oxygen gas reactor; ~~(101) characterised in that~~
20 measuring a the temperature of the cellulose pulp ~~is measured~~ at ~~the~~ a start of the oxygen gas delignification at ~~at least~~ two different locations ~~with the aim of determining the to~~ determine an initial consumption of delignification chemicals that have reacted in ~~the~~ a fluid phase, ~~which using the~~ determined initial consumption of
25 delignification chemicals ~~is used~~ to control or adjust the ~~charged an~~ amount of at least one delignification chemical ~~charged~~ to the oxygen gas delignification ~~of at least one delignification chemical,~~
30 reducing or increasing an amount of delignification chemicals ~~charged such that the charged amount of chemicals can be reduced~~ while at the same time ~~guaranteeing the presence~~ ensuring a presence of delignification chemicals during the complete reaction process.

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2. (Currently amended) The method according to claim 1, ~~characterised in that~~ wherein the positions of the measurements between two subsequent temperature measurements correspond to positions between which the cellulose pulp has had a retention time in the reactor system between 10 seconds and 30 minutes, ~~preferably 1-10 minutes.~~
3. (Currently amended) The method according to ~~either claim 1 and 2, characterised in that~~ claim 1 wherein a the first temperature measurement ~~(T1)~~ is made at a location after the addition of oxygen gas.
4. (Currently amended) The method according to ~~either claim 1 and 2, characterised in that~~ claim 1 wherein a the first temperature measurement ~~(T1)~~ is made at a location before the addition of oxygen gas.
5. (Currently amended) The method according to ~~any one of claims 1-4, characterised in that~~ claim 1 wherein two temperature measurements are made and that ~~the~~ a derivative between the first and the second temperature measurements is used to control ~~the~~ an ~~charged~~ amount charged of at least one delignification chemical.
6. (Currently amended) The method according to ~~any one of claims 1-4, characterised in that~~ claim 1 wherein the temperature measurements are coupled to an oxygen gas trend, ~~which oxygen gas trend that~~ is used to control ~~the~~ an ~~charged~~ amount charged of at least one delignification chemical.
7. (Currently amended) A system for ~~the~~ an oxygen gas delignification of cellulose pulp in a gas/fluid suspension in which the oxygen gas delignification takes place in a

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reactor system, comprising:
an oxygen gas reactor having delignification chemicals
contained therein;
an alkali addition location for adding alkali to the system,
5 the alkali addition location being upstream of the oxygen gas
reactor;
a delignification chemicals addition location for adding
delignification chemicals to the system, the delignification
chemicals addition location being upstream of the oxygen gas
10 reactor;
~~with one or several oxygen gas reactors, in which~~
~~delignification chemicals such as oxygen gas at such a~~
~~quantity that oxygen gas remains present during the complete~~
~~reaction process in the reactors together with alkali at an~~
15 ~~amount that ensures that the pH remains over 9 are added at~~
~~least before a first oxygen gas reactor (101) characteri~~
~~zsed in that~~
a first temperature sensor located adjacent to the
delignification chemicals addition location;
20 a second temperature sensor located in the reactor system
downstream of the first temperature sensor;
the first and second temperature sensors being electrically
connected to a control unit;
the control unit being electrically connected to a control
25 valve; and
the control valve being in operative engagement with a
delignification chemicals supply to control a flow of
delignification chemicals to the delignification chemicals
addition location.
30 ~~two sensors (113) for temperature measurement are arranged~~
~~after each other in the direction of flow of the pulp with~~
~~physical locations in the system that ensure a retention time~~
~~of 1-10 minutes, the sensors (113) transfer the measured data~~
~~via means for signal transmission to a suitable control unit~~
35 ~~(111), which control unit (111) calculates the amount of~~

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~~delignification chemicals consumed, the control unit (111) subsequently regulates a signal controlled valve (112) for the control of the amount of at least one delignification chemical added.~~

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8. (Currently amended) The system according to claim 7 ~~characterised in that wherein~~ the first temperature sensor (113), viewed from the direction of flow a flow direction of the cellulose pulp through the system, is located immediately downstream of the delignification chemicals addition location. ~~is placed at a location directly after the addition of oxygen gas.~~

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9. (Currently amended) The system according to claim 7 ~~characterised in that wherein~~ the first temperature sensor (113), viewed from the direction of flow a flow direction of the cellulose pulp through the system, is located immediately upstream of the delignification chemicals addition location. ~~is placed at a location directly before the addition of oxygen gas.~~

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